

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
24 December 2003 (24.12.2003)

PCT

(10) International Publication Number
WO 03/106491 A2(51) International Patent Classification⁷: C07K 14/705

(21) International Application Number: PCT/IB03/03163

(22) International Filing Date: 18 June 2003 (18.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0201863-8 18 June 2002 (18.06.2002) SE
60/391,788 25 June 2002 (25.06.2002) US

(71) Applicant (for all designated States except US): CEPPEP AB [SE/SE]; C/O HealthCap AB, Strandvägen 5B, S-114 51 Stockholm (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HÄLLBRINK, Mattias [SE/SE]; Upplandsgatan 63, S-113 28 Stockholm (SE). POOGA, Margus [EE/EE]; Estonian Biocenter, Riia 23, E-51010 Tartu (EE). METSIS, Madis [EE/SE]; Odlingsvägen 5, plan 3, S-170 77 Solna (SE). KOGERMAN, Priit [EE/EE]; Orava 24, E-79601 Tabasalu (EE). VALKNA, Andreas [EE/EE]; Rohuneeme 78a, Viimsi (EE). MEIKAS, Anne [EE/EE]; Uus-Saku 6-1, Saku Estonia (EE). LINDGREN, Maria [SE/SE]; Upplandsgatan 63, S-113 28 Stockholm (SE). GRÄSLUND, Astrid [SE/SE]; Cedervägen 5, S-191 44 Sollentuna (SE). ERIKSSON, Göran [SE/SE]; Vintertullstorget 38, 6 tr, S-116 43 Stockholm (SE). ÖSTENSSON, Claes, Göran [SE/SE]; Olof af Acrels väg 1, S-171 64 Solna (SE). BUDIHNA, Metka [SI/SI]; Na Gmajni 50, 1210 Ljubljana-Sentvid (SI). ZORKO, Matjaz [SI/SI]; Pijava Gorica 172, S-1291 Skofljica (SI). ELMQUIST, Anna [SE/SE]; Halstab 421, S-761 71 Norrtälje (SE). SOOMETS, Ursel [EE/EE]; Puiestee 75 A, Tartu (EE). LUNDBERG, Pontus [EE/SE]; Gustav III's Boulevard 4, S-169 72 Solna (SE). JÄRVER, Peter [SE/SE]; Baltzar von Platens g. 11,

S-112 42 Stockholm (SE). SAAR, Külliki [EE/SE]; c/o Cronander, Markvardsgatan 10, S-113 53 Stockholm (SE). EL-ANDALOUSSI, Samir [SE/SE]; Amanuenvägen 1, S-104 05 Stockholm (SE). KILK, Kalle [EE/SE]; c/o Hultberg, Kälvägen 20, S-182 38 Danderyd (SE). LANGEL, Ülo [SE/SE]; Trollesundsvägen 21, S-124 32 Bandhagen (SE).

(74) Agent: SKOGLÖSA, Ylva; Ström & Gulliksson IP AB, P.O. Box 7086, S-103 87 Stockholm (SE).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report
- with sequence listing part of description published separately in electronic form and available upon request from the International Bureau

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 03/106491 A2

(54) Title: CELL PENETRATING PEPTIDES

(57) **Abstract:** The present invention relates to a method for predicting or designing, detecting, and/or verifying a novel cell-penetrating peptide (CPP) and to a method for using said new CPP and/or a novel usage of a known CPP for an improved cellular uptake of a cellular effector, coupled to said CPP. Furthermore, the present invention also relates to a method for predicting or designing, detecting and/or verifying a novel cell-penetrating peptide (CPP) that mimics cellular effector activity and/or inhibits cellular effector activity. The present invention additionally relates to the use of said CPP for treating and/or preventing a medical condition and to the use of said CPP for the manufacture of a pharmaceutical composition for treating a medical condition.